

NEWS CONFERENCE

OF

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SECRETARY OF DEFENSE

THE PENTAGON

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Secretary McNamara: As you know, President Johnson announced yesterday that the United States is able to intercept and destroy armed satellites. I would like to give you, within the limits of military security, some additional information about this capability.

The two anti-satellite systems which the President discussed are operated by the Army and the Air Force. They are under the operational control of the Continental Air Defense Command. They make use of certain Navy facilities as well.

The Air Force system employs the Thor missile, while the Army system is a derivation of the Nike-Zeus anti-ballistic missile system. Both systems utilize data from our global space detection and tracking networks, both the networks of the Air Force and the networks of the Navy, and these, as you know, include various radars and sensors and computers in various places all over the world.

The Army program to develop its anti-satellite capability was begun in May of 1962, and the Air Force program began early in 1963.

The Army program as it was a derivative of the Nike-Zeus system had its roots, of course, in work of prior years, and the Air Force system, since it was a derivative of and utilized the Thor missile, of course, benefited from all of the work that had been done over a period of years on the Thor system.

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It is especially significant, I think, that the Army and the Air Force each successfully intercepted satellites one year after I issued the basic instruction to them to develop an anti-satellite capability. The Army system was operational on the first of August, but it completed a successful test in May of 1963. It was first operational August 1, 1963, but it completed an operational test in May of 1963, twelve months after it received my instruction to proceed with the development of that system in May of 1962.

The Air Force system completed a successful operational test in May of 1964, after having received my instructions, just about twelve months before that time, roughly May of 1963.

These two systems have been thoroughly tested and have intercepted satellites in space, U. S. satellites I want to emphasize, passing so close to the satellites as to be within the destruction radius of their warheads.

I will not be able to tell you the locations at which these systems are deployed. That information is classified, and we expect it to remain so.

To date we have invested about \$80 million in total in the two systems to achieve this capability. That figure doesn't include the funds, of course, which we have been expending on the Nike-Zeus system for anti-ballistic missile development purposes, or on the Thor system, nor does it include funds spent on the Space Detection and Tracking System, which of course is fundamental to both of these installations.

Now, turning for a moment to the over-the-horizon radars, this is a family of systems. This was also announced yesterday, as you recall, by President Johnson. I think it is one of the most dramatic of our new developments. We have alluded to these developments in previous statements.

For example, in January of this year, in my comments to the Congress, I mentioned work was being carried on in this field. The work has been carried on for a number of years, as many of you know.

These new systems will bounce radar signals off of the ionosphere and send them to the earth, far beyond the horizon, differing thereby in the normal radar detection capability, which is limited to line of sight.

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Missiles being launched reflect or otherwise influence these signals, which are received back at the transmitting stations or at other points far beyond the horizon, hence far beyond the line of sight. These signals as they are received back are then processed by electronic techniques to provide the target detection and target identification.

The capabilities of this system are not limited to missile launch detection, but also will provide information on hostile aircraft movements. More than \$50 million has been invested to date in this family of over-horizon radars, to develop and produce installations for these missile and aircraft detection systems. This radar will provide detection of missiles within seconds after they are launched, thereby greatly increasing our warning, which at the present time, as you know, is limited to about 15 minutes.

So much, then, for my initial comments. I will try and take your questions. Before doing so, I want to emphasize again the limitations which I face in responding to them.

Yes sir.

QUESTION: Would you say whether the anti-satellite rockets carry a nuclear warhead?

SECRETARY McNAMARA: No, I am not going to comment on the type of warhead they carry. I simply want to emphasize that we have tested the systems, and they have had successful intercepts and passed within the -- with the distance such that it is within the lethal radius of the warheads they are carrying.

QUESTION: Can you tell us the names of these two satellite programs?

SECRETARY McNAMARA: We actually haven't named them, frankly. We simply call --

QUESTION: Do you have a designation?

SECRETARY McNAMARA: We have a number, I think. One of them is Program X, and the other is Program Y, in terms of numbers, but I don't believe there are any names to them, and numbers wouldn't mean anything to you. I have forgotten the numbers, to tell you the truth.

QUESTION: Could you place the dates on these two successful interceptions, to save us going back? Could you give us an idea?

- M O R E -

SECRETARY McNAMARA: Well, I don't think you can find the dates by going back. I hope you can't. I can tell you the dates of two of the intercepts, successful intercepts, and then I simply want to say we have had several others. I don't want to discuss the numbers of them, but the first successful intercept by the Nike-Zeus derivative, the Army system, in other words, was in May of '63, and the first successful intercept by the Thor derivative, the Air Force system, was in -- toward the end of May of '64.

QUESTION: Can you pinpoint that at all? The date?

SECRETARY McNAMARA: No, I can't help further than that.

QUESTION: Why the Thor system, if the Zeus system had already been tested and worked?

SECRETARY McNAMARA: Right, that is a good question. I anticipated it, and I think I can answer by simply saying the characteristics of these systems differ. They are both the same, in the sense that they are land-based, and in that sense, they differ radically from some of the previous efforts which you recall were based on one satellite destroying another. This was the essence of the SAINT approach.

But in this instance, these systems are quite different, and they have characteristics which complement each other, and therefore, we felt it worthwhile to develop both.

Actually, when I issued the first instruction in May of 1962, instructing the Army to proceed, we weren't entirely clear that the Air Force had a capability with the Thor to develop such a system, and moreover, it wasn't entirely clear that the Army system by itself would not be adequate. Later, the Air Force proceeded further in their study of the Thor application, determined that it would be possible to develop an anti-satellite capability based on it, and not only determined that, but indicated ways in which it could provide capabilities that the Army system could not.

Now, the next question, of course, would be why keep the Army system then after you get the Air Force system?

And the answer to that is that the Army system has capabilities the Air Force system doesn't have, so we consider it desirable to keep both.

QUESTION: Mr. Secretary.

SECRETARY McNAMARA: Yes.

QUESTION: Could you give us an idea of which targets were intercepted?

SECRETARY McNAMARA: No, I only want to say on that that they were S. satellites that we are directing the tests against.

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QUESTION: Does this thing have a loiter capability? In other words, it goes up --

SECRETARY McNAMARA: No, it has no loiter capability.

QUESTION: It has to be there when the satellite gets there?

SECRETARY McNAMARA: It has to be there when the satellite is there, that is right. This is one of the very important characteristics of the system. It is both a requirement and a capability.

QUESTION: Technically, Mr. Secretary, isn't this a relatively easy problem, of intercepting a satellite, to establish within a few orbits its trajectory and it's just a simple problem of mathematics?

SECRETARY McNAMARA: True, it was rather difficult for us. Maybe we were stupid. We felt it quite a difficult project.

QUESTION: \$80 million isn't very much.

SECRETARY McNAMARA: No, but you don't measure difficulty in terms of dollars, and it proved quite a difficult project, and one which when successfully solved, represented, we felt, quite an achievement.

QUESTION: Mr. Secretary, to follow up Finney's question, can you get this thing on the first orbit, or do you have to wait until an orbit is established?

SECRETARY McNAMARA: Well, we are not going to discuss the characteristics of the system in terms of when it will destroy the satellite in relation to the time of launch of the satellite.

QUESTION: It does have to make an in-space contact?

SECRETARY McNAMARA: Absolutely, it has to make an in-space intercept.

QUESTION: Mr. Secretary, were satellites actually destroyed in the tests, or were --

SECRETARY McNAMARA: No, we intercepted the satellites, and by having placed measurement devices in the satellites, we measured the distance between the satellite and the point of intercept, if you will, and then related that to the destruction capability of the warhead carried by the missile.

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QUESTION: Mr. Secretary, in a war situation, how would you determine whether this enemy satellite were armed or not? Or would you have to shoot down everything?

SECRETARY McNAMARA: Well, what you are asking is, what's our inspection capability, if you will, or what's our capability for distinguishing potentially hostile satellites from non-hostile satellites, and all I can say on that at the moment is that we are satisfied we have the information we need to act on this.

QUESTION: Mr. Secretary, we wanted to ask you if you can tell whether a satellite is armed. I think you have just answered that.

SECRETARY McNAMARA: Well, we are satisfied we have the capability to do what we need to do under these circumstances.

QUESTION: Mr. Secretary, on the over-the-horizon radar, is this an outgrowth of Project Madre at N. R. L. ?

SECRETARY McNAMARA: Well, the over-the-horizon radar has roots extending back a number of years. Operation Madre has been a project contributing to it. I wouldn't say it was an outgrowth of it. Actually, in this over-the-horizon radar, it isn't an over-the-horizon radar, it is a family of over-the-horizon radars, and one of the elements of that family was contributed to particularly by Madre.

QUESTION: Does it have a name?

SECRETARY McNAMARA: But even that particular element had roots going back much further than Madre. I was curious as to how this development came about. Last January, we were anticipating we would be able to do what we have since done, and in looking into it at that time, I was told that it went clear back into 1949. As a matter of fact, apparently the British have done substantial work in this field, which over the years, has influenced us. But it went back into 1949, and the Navy was working on it during the 1950's, the British have been working on it, but the big leap forward came by some work that took place in the last, oh, two to three years, as I remember. There were some very important tests that began in 1962. But there is no question but what this goes back a decade, at the very least.

QUESTION: Was that established on a site, somewhere, like a BMEWS site, or --

SECRETARY McNAMARA: Well, in this instance, a number of installations are involved. Worldwide.

QUESTION: New ones, or supplementing old, or both?

SECRETARY McNAMARA: Both.

QUESTION: Are there a number of installations for the anti-satellite, or one each?

SECRETARY McNAMARA: I don't wish to comment on the numbers, because I don't want to discuss locations, and if I start talking numbers, I am going to be cornered into a discussion of locations fairly soon.

QUESTION: Mr. Secretary, can you give us an indication of how much the warning time was increased by the new item?

SECRETARY McNAMARA: Yes, very substantially. In the case of missiles, hostile missiles directed against this country, the BMEWS would provide warning of perhaps 15 minutes. The total flight time might be on the order of 30 minutes, depending upon the point of launch, in an enemy country, and since the over-the-horizon radar would warn of launch within seconds afterwards, you can begin to calculate the additional warning time. I would just say it would come close to doubling the warning time.

QUESTION: Mr. Secretary, does it make BMEWS obsolete, then?

SECRETARY McNAMARA: No, this system doesn't have some of the characteristics of BMEWS. And hence, BMEWS will continue to be an important element of our warning system. What we are finding here is what we did in the anti-satellite destruction systems as well. One system complements another, rather than replacing it, so we don't anticipate that this over-the-horizon radar will replace BMEWS, certainly not at any time in the foreseeable future, say, five or eight years.

On the other hand, it may substitute for some of our other warning systems, particularly certain of our aircraft warning systems in the years ahead. I think it is too early to determine that.

QUESTION: SAGE, for instance, sir?

SECRETARY McNAMARA: No, not SAGE. SAGE is really a control system rather than warning system, but it may well substitute for some of our forward radar lines that we are presently using for warning of --

QUESTION: DEW Line?

SECRETARY McNAMARA: Well, I don't want to pinpoint it that exactly, but we have DEW Line extensions, for example, picket ships, and various other types of forward radar warning systems, some of which we think can be substituted for by this system, after it becomes operational, and we have determined its whole capability. Yes?

QUESTION: Mr. Secretary, will you need substantial new money in the next budget to extend or expand this system, or --

SECRETARY McNAMARA: No, I don't think so. In the case of the over-the-horizon radar, we have spent, oh, maybe \$50 million to date. I say we have spent to date -- this is, let's say in the last two or three years -- we have spent \$50 million. As I mentioned, the roots of it go back a decade. The expenditures prior to the period I am talking about, prior to the last two or three years, were really very small. They were running, I don't know, \$1 million a year or something like that, but we have spent about \$50 million in the last two or three years, and I would guess that we would probably want to add another \$50 million to that, in the next budget.

QUESTION: What about the anti-satellite expenses?

SECRETARY McNAMARA: The anti-satellite expenditures have been about \$80 million for these two systems to date. In addition, of course, to the basic expenditures for THOR and ZEUS and SPADATS.

QUESTION: Mr. Secretary, can you tell us which contractors are involved in this?

SECRETARY McNAMARA: The principal contractor in the Army system, anti-satellite capability system, is the Bell Laboratory and Western Electric, with Douglas producing the launch vehicle, missile, itself.

In the case of the Air Force, you are familiar with the THOR, and in the case of the over-the-horizon radar, a number of contractors are involved. The over-the-horizon radar uses both the forward-scatter technique and the back-scatter technique, and a mixture of those, and we have various contractors in the various radar fields. To tell you the truth, I can't think of the names of more than one. I will see if I can get them for you. I know that Raytheon is involved in this, and has one of the important contracts, but there are a large number of other contractors involved, as well. Yes?

QUESTION: Mr. Secretary, two questions: Does the new family of radars have a name or an indicator; and also, what do we feel is the situation with regard to the Soviet development in both these areas?

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SECRETARY McNAMARA: Well, first, the new family of radars does not have a name. There are a number of projects that we have been working on which we have decided to proceed with simultaneously, and I can't even remember the names of them. Most of them have numbers rather than names, but in any event, the family doesn't have a name; and secondly, with respect to the Soviets, I believe we would know if they had advanced as far as we have in this field of over-the-horizon radar work. I think that is right, and we don't have any such knowledge, so I can only conclude that they haven't advanced that far, and this, I think, is typical of much of their research and development work.

On balance, there is no question in my mind but what this Nation is substantially ahead of the Soviet Union in research and development work related to military weapons. I think it has been ahead for a decade or two. It is still ahead today. I personally believe it will continue to remain ahead in the future, but as has been true in so many other instances, where we have had a lead in the past, we must expect that the Soviets will eventually develop the same technique we have. They may do it five or seven or eight years later.

So the conclusion I come to in my own mind is they don't have the technique today. We are very likely to retain our lead for a few years to come. They will eventually develop it, I think.

QUESTION: Mr. Secretary, can you come to any conclusion --

QUESTION: Mr. Secretary, on the satellite nullification, could you tell us what altitudes that you have been able to nullify or come within a range?

SECRETARY McNAMARA: Yes, within some limits. We have carried out intercepts at many different altitudes extending up hundreds of miles.

QUESTION: As far as, say, a synchronous satellite?

SECRETARY McNAMARA: Well, I just want to leave it at that -- hundreds of miles. I realize that's vague, but this is one of the points, just leave it as I said. Hundreds of miles.

QUESTION: Hundreds, not thousands?

SECRETARY McNAMARA: Yes, I said hundreds.

QUESTION: What effect does the increased warning time have on the outlook for the NIKE-X system?

SECRETARY McNAMARA: I don't believe it will affect the outlook for the NIKE-X system. We are making excellent progress on the NIKE-X. I think the job that Bell Laboratories and Western Electric have done on the NIKE-X is really one of the outstanding weapons development jobs in this country in the last two decades. The progress has certainly exceeded my fondest hopes, but having said that, I don't want you to think that it has reached the point where we can say for sure it should be deployed. The deployment of the NIKE-X would cost probably \$15 billion to \$20 billion, to place the system around cities containing about 35 % of our population, and after the initial investment,

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would require expenditures of perhaps \$1 billion or \$2 billion a year for operations and maintenance, and whether these huge expenditures, both the initial investment and the operation and maintenance expense, are justified is a question that we haven't addressed as yet. We haven't addressed it because we haven't reached the point in the development of the NIKE-X system where a production decision is required, but when we address it, it is going to be a very, very difficult decision, because although NIKE-X development has, as I said, progressed rapidly and effectively, and while the characteristics of the system exceed, in many places, our initial objectives, there are still many limitations associated with it, and whether, with these limitations, it will be wise to expend the huge sums that would be required to deploy it, I can't say. In any case, I don't believe that decision will be affected by this over-the-horizon radar development.

QUESTION: Mr. Secretary --

SECRETARY McNAMARA: Yes?

QUESTION: Does the over-the-horizon radar get its information entirely from the reflections of ionized gases, and can you so --

SECRETARY McNAMARA: Let me ask Dr. Fubini, who has been very active in this program. Can we answer the question, Gene, without disclosing information we don't want to disclose?

DR. EUGENE FUBINI: I think we can. This, as the Secretary said -- there are a family of devices, and at least part of this family is based on the effects of the ionized gases and we feel it is not the ionized gases themselves.

QUESTION: Does this involve -- to continue this -- in the over-the-horizon radar, will this be used within a NATO system involving others of our allies?

SECRETARY McNAMARA: I am sorry. I was reading this note. I didn't hear you.

QUESTION: I said, does this system -- will it involve our allies? I mean, for example, the installations in Turkey, the rest of the world, will it involve -- become part of a NATO system?

SECRETARY McNAMARA: The information would be available to NATO.

I just received a note here, gentlemen, that is going to cause me to leave. I am sorry to have to draw to a close, although I must say to my point of view it comes at a convenient time.

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THE PRESS: Thank you very much.

Do you rate the bomber possibilities you mentioned in the speech today, the bomber alternatives?

SECRETARY McNAMARA: No. As far as the bomber is concerned, the question wasn't asked, but I think you would be interested to know that the over-the-horizon radar does give us more warning time, or capability of more warning time for bomber attacks, and this, of course, increases survivability of bombers by some percentage. I am sorry I can't give you any more.

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